



SEQUENCE LISTING

<110> Thomason, Arlen
Liu, Benxian

<120> Fibroblast Growth Factor-Like Polypeptides

<130> 99,371

<140> 09/391,861
<141> 1999-09-07

<160> 41

<170> PatentIn Ver. 2.0

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 Arg Ser Pro Ser Tyr Ala Ser
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Pro Ala Arg Phe Leu Pro Leu Pro Gly Leu Pro Pro Ala Pro Pro Glu		
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 Val Lys Ala Ser Arg Phe Leu Cys Gln Gln Pro Asp Gly Ala Leu Tyr
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 Gly Ser Pro His Phe Asp Pro Glu Ala Cys Ser Phe Arg Glu Leu Leu
 115 120 125

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 130 135 140

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 145 150 155 160

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 165 170 175

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 180 185 190

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Arg Glu Asp Gly Thr Val Val Gly Ala Ala His Arg Ser Pro Glu Ser
65 70 75 80

Leu Leu Glu Leu Lys Ala Leu Lys Pro Gly Val Ile Gln Ile Leu Gly
85 90 95

Val Lys Ala Ser Arg Phe Leu Cys Gln Gln Pro Asp Gly Ala Leu Tyr
100 105 110

Gly Ser Pro His Phe Asp Pro Glu Ala Cys Ser Phe Arg Glu Leu Leu
115 120 125

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130 135 140

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145 150 155 160

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165 170 175

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85 90 95

Glu Leu Leu Leu Glu Asp Gly Tyr Asn Val Tyr Gln Ser Glu Ala His
100 105 110

Gly Leu Pro Leu His Leu Pro Gly Asn Lys Ser Pro His Arg Asp Pro
115 120 125

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130 135 140

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35 40 45

Pro Glu Ser Leu Leu Glu Leu Lys Ala Leu Lys Pro Gly Val Ile Gln
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65 70 75 80

Ala Leu Tyr Gly Ser Pro His Phe Asp Pro Glu Ala Cys Ser Phe Arg
85 90 95

Glu Leu Leu Leu Glu Asp Gly Tyr Asn Val Tyr Gln Ser Glu Ala His
100 105 110

Gly Leu Pro Leu Arg Leu Pro Gln Lys Asp Ser Pro Asn Gln Asp Ala
115 120 125

Thr Ser Trp Gly Pro Val Arg Phe Leu Pro Met Pro Gly Leu Leu His
130 135 140

Glu Pro Gln Asp Gln Ala Gly Phe Leu Pro Pro Glu Pro Pro Asp Val

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35 40 45
Thr Arg Asp Arg Ser Asp Gln His Ile Gln Leu Gln Leu Ser Ala Glu
50 55 60
Ser Val Gly Glu Val Tyr Ile Lys Ser Thr Glu Thr Gly Gln Tyr Leu
65 70 75 80
Ala Met Asp Thr Asp Gly Leu Leu Tyr Gly Ser Gln Thr Pro Asn Glu
85 90 95
Glu Cys Leu Phe Leu Glu Arg Leu Glu Glu Asn His Tyr Asn Thr Tyr
100 105 110
Ile Ser Lys Lys His Ala Glu Lys Asn Trp Phe Val Gly Leu Lys Lys
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35 40 45
Phe Ser Lys Val Arg Phe Cys Ser Gly Arg Lys Arg Pro Val Arg Arg
50 55 60
Arg Pro Glu Pro Gln Leu Lys Gly Ile Val Thr Arg Leu Phe Ser Gln
65 70 75 80
Gln Gly Tyr Phe Leu Gln Met His Pro Asp Gly Thr Ile Asp Gly Thr
85 90 95
Lys Asp Glu Asn Ser Asp Tyr Thr Leu Phe Asn Leu Ile Pro Val Gly
100 105 110
Leu Arg Val Val Ala Ile Gln Gly Val Lys Ala Ser Leu Tyr Val Ala
115 120 125
Met Asn Gly Glu Gly Tyr Leu Tyr Ser Ser Asp Val Phe Thr Pro Glu
130 135 140
Cys Lys Phe Lys Glu Ser Val Phe Glu Asn Tyr Tyr Val Ile Tyr Ser
145 150 155 160
Ser Thr Leu Tyr Arg Gln Gln Glu Ser Gly Arg Ala Trp Phe Leu Gly
165 170 175
Leu Asn Lys Glu Gly Gln Ile Met Lys Gly Asn Arg Val Lys Lys Thr
180 185 190
Lys Pro Ser Ser His Phe Val Pro Lys Pro Ile Glu Val Cys Met Tyr
195 200 205
Arg Glu Pro Ser Leu His Glu Ile Gly Glu Lys Gln Gly Arg Ser Arg
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Lys Ser Ser Gly Thr Pro Thr Met Asn Gly Gly Lys Val Val Asn Gln
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Asp Ser Thr

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<213> Homo sapiens

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Ser Lys Val Arg Ile Phe Gly Leu Lys Lys Arg Arg Leu Arg Arg Gln			
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Asp Pro Gln Leu Lys Gly Ile Val Thr Arg Leu Tyr Cys Arg Gln Gly			
	65	70	75
Tyr Tyr Leu Gln Met His Pro Asp Gly Ala Leu Asp Gly Thr Lys Asp			
	85	90	95
Asp Ser Thr Asn Ser Thr Leu Phe Asn Leu Ile Pro Val Gly Leu Arg			
	100	105	110
Val Val Ala Ile Gln Gly Val Lys Thr Gly Leu Tyr Ile Ala Met Asn			
	115	120	125
Gly Glu Gly Tyr Leu Tyr Pro Ser Glu Leu Phe Thr Pro Glu Cys Lys			
	130	135	140
Phe Lys Glu Ser Val Phe Glu Asn Tyr Tyr Val Ile Tyr Ser Ser Met			
	145	150	155
Leu Tyr Arg Gln Gln Glu Ser Gly Arg Ala Trp Phe Leu Gly Leu Asn			
	165	170	175
Lys Glu Gly Gln Ala Met Lys Gly Asn Arg Val Lys Lys Thr Lys Pro			
	180	185	190
Ala Ala His Phe Leu Pro Lys Pro Leu Glu Val Ala Met Tyr Arg Glu			
	195	200	205
Pro Ser Leu His Asp Val Gly Glu Thr Val Pro Lys Pro Gly Val Thr			
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Pro Ser Lys Ser Thr Ser Ala Ser Ala Ile Met Asn Gly Gly Lys Pro			
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Val Asn Lys Ser Lys Thr Thr			
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Tyr Cys Lys Asn Gly Gly Phe Phe Leu Arg Ile His Pro Asp Gly Arg
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Val Asp Gly Val Arg Glu Lys Ser Asp Pro His Ile Lys Leu Gln Leu
50 55 60
Gln Ala Glu Glu Arg Gly Val Val Ser Ile Lys Gly Val Cys Ala Asn
65 70 75 80
Arg Tyr Leu Ala Met Lys Glu Asp Gly Arg Leu Leu Ala Ser Lys Cys
85 90 95
Val Thr Asp Glu Cys Phe Phe Glu Arg Leu Glu Ser Asn Asn Tyr
100 105 110
Asn Thr Tyr Arg Ser Arg Lys Tyr Thr Ser Trp Tyr Val Ala Leu Lys
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<210> 18
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<213> Homo sapiens

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35 40 45
Tyr Cys Ala Thr Lys Tyr His Leu Gln Leu His Pro Ser Gly Arg Val
50 55 60
Asn Gly Ser Leu Glu Asn Ser Ala Tyr Ser Ile Leu Glu Ile Thr Ala
65 70 75 80
Val Glu Val Gly Ile Val Ala Ile Arg Gly Leu Phe Ser Gly Arg Tyr
85 90 95
Leu Ala Met Asn Lys Arg Gly Arg Leu Tyr Ala Ser Glu His Tyr Ser
100 105 110
Ala Glu Cys Glu Phe Val Glu Arg Ile His Glu Leu Gly Tyr Asn Thr
115 120 125

Tyr Ala Ser Arg Leu Tyr Arg Thr Val Ser Ser Thr Pro Gly Ala Arg
130 135 140
Arg Gln Pro Ser Ala Glu Arg Leu Trp Tyr Val Ser Val Asn Gly Lys
145 150 155 160
Gly Arg Pro Arg Arg Gly Phe Lys Thr Arg Arg Thr Gln Lys Ser Ser
165 170 175
Leu Phe Leu Pro Arg Val Leu Asp His Arg Asp His Glu Met Val Arg
180 185 190
Gln Leu Gln Ser Gly Leu Pro Arg Pro Pro Gly Lys Gly Val Gln Pro
195 200 205
Arg Arg Arg Arg Gln Lys Gln Ser Pro Asp Asn Leu Glu Pro Ser His
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Val Gln Ala Ser Arg Leu Gly Ser Gln Leu Glu Ala Ser Ala His
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35 40 45
Ser Leu Val Ala Leu Ser Leu Ala Arg Leu Pro Val Ala Ala Gln Pro
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Lys Glu Ala Ala Val Gln Ser Gly Ala Gly Asp Tyr Leu Leu Gly Ile
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Lys Arg Leu Arg Arg Leu Tyr Cys Asn Val Gly Ile Gly Phe His Leu
85 90 95
Gln Ala Leu Pro Asp Gly Arg Ile Gly Gly Ala His Ala Asp Thr Arg
100 105 110
Asp Ser Leu Leu Glu Leu Ser Pro Val Glu Arg Gly Val Val Ser Ile
115 120 125
Phe Gly Val Ala Ser Arg Phe Phe Val Ala Met Ser Ser Lys Gly Lys
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Leu Tyr Gly Ser Pro Phe Phe Thr Asp Glu Cys Thr Phe Lys Glu Ile

145 150 155 160

Leu Leu Pro Asn Asn Tyr Asn Ala Tyr Glu Ser Tyr Lys Tyr Pro Gly
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<213> Homo sapiens

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35 40 45

Ser Ser Ser Ala Met Ser Ser Ser Ala Ser Ser Ser Pro Ala
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Trp Ser Pro Ser Gly Arg Arg Thr Gly Ser Leu Tyr Cys Arg Val Gly
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Ile Gly Phe His Leu Gln Ile Tyr Pro Asp Gly Lys Val Asn Gly Ser
100 105 110

His Glu Ala Asn Met Leu Ser Val Leu Glu Ile Phe Ala Val Ser Gln
115 120 125

Gly Ile Val Gly Ile Arg Gly Val Phe Ser Asn Lys Phe Leu Ala Met
130 135 140

Ser Lys Lys Gly Lys Leu His Ala Ser Ala Lys Phe Thr Asp Asp Cys
145 150 155 160

Lys Phe Arg Glu Arg Phe Gln Glu Asn Ser Tyr Asn Thr Tyr Ala Ser
165 170 175

Ala Ile His Arg Thr Glu Lys Thr Gly Arg Glu Trp Tyr Val Ala Leu
180 185 190

Asn Lys Arg Gly Lys Ala Lys Arg Gly Cys Ser Pro Arg Val Lys Pro
195 200 205

Gln His Ile Ser Thr His Phe Leu Pro Arg Phe Lys Gln Ser Glu Gln
210 215 220
Pro Glu Leu Ser Phe Thr Val Thr Val Pro Glu Lys Lys Asn Pro Pro
225 230 235 240
Ser Pro Ile Lys Ser Lys Ile Pro Leu Ser Ala Pro Arg Lys Asn Thr
245 250 255
Asn Ser Val Lys Tyr Arg Leu Lys Phe Arg Phe Gly
260 265

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Gly Met Val Val Pro Ser Pro Ala Gly Thr Arg Ala Asn Asn Thr Leu
35 40 45
Leu Asp Ser Arg Gly Trp Gly Thr Leu Leu Ser Arg Ser Arg Ala Gly
50 55 60

Leu Ala Gly Glu Ile Ala Gly Val Asn Trp Glu Ser Gly Tyr Leu Val
65 70 75 80
Gly Ile Lys Arg Gln Arg Arg Leu Tyr Cys Asn Val Gly Ile Gly Phe
85 90 95

His Leu Gln Val Leu Pro Asp Gly Arg Ile Ser Gly Thr His Glu Glu
100 105 110

Asn Pro Tyr Ser Leu Leu Glu Ile Ser Thr Val Glu Arg Gly Val Val
115 120 125

Ser Leu Phe Gly Val Arg Ser Ala Leu Phe Val Ala Met Asn Ser Lys
130 135 140

Gly Arg Leu Tyr Ala Thr Pro Ser Phe Gln Glu Glu Cys Lys Phe Arg
145 150 155 160

Glu Thr Leu Leu Pro Asn Asn Tyr Asn Ala Tyr Glu Ser Asp Leu Tyr
165 170 175

Gln Gly Thr Tyr Ile Ala Leu Ser Lys Tyr Gly Arg Val Lys Arg Gly
180 185 190

Ser Lys Val Ser Pro Ile Met Thr Val Thr His Phe Leu Pro Arg Ile
195 200 205

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35 40 45
Pro Glu Arg His Thr Arg Ser Tyr Asp Tyr Met Glu Gly Gly Asp Ile
50 55 60
Arg Val Arg Arg Leu Phe Cys Arg Thr Gln Trp Tyr Leu Arg Ile Asp
65 70 75 80
Lys Arg Gly Lys Val Lys Gly Thr Gln Glu Met Lys Asn Asn Tyr Asn
85 90 95
Ile Met Glu Ile Arg Thr Val Ala Val Gly Ile Val Ala Ile Lys Gly
100 105 110
Val Glu Ser Glu Phe Tyr Leu Ala Met Asn Lys Glu Gly Lys Leu Tyr
115 120 125
Ala Lys Lys Glu Cys Asn Glu Asp Cys Asn Phe Lys Glu Leu Ile Leu
130 135 140
Glu Asn His Tyr Asn Thr Tyr Ala Ser Ala Lys Trp Thr His Asn Gly
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<213> Homo sapiens

<400> 23

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 35 40 45

Pro Ala Val Thr Asp Leu Asp His Leu Lys Gly Ile Leu Arg Arg Arg
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Gln Leu Tyr Cys Arg Thr Gly Phe His Leu Glu Ile Phe Pro Asn Gly
 65 70 75 80

Thr Ile Gln Gly Thr Arg Lys Asp His Ser Arg Phe Gly Ile Leu Glu
 85 90 95

Phe Ile Ser Ile Ala Val Gly Leu Val Ser Ile Arg Gly Val Asp Ser
 100 105 110

Gly Leu Tyr Leu Gly Met Asn Glu Lys Gly Glu Leu Tyr Gly Ser Glu
 115 120 125

Lys Leu Thr Gln Glu Cys Val Phe Arg Glu Gln Phe Glu Glu Asn Trp
 130 135 140

Tyr Asn Thr Tyr Ser Ser Asn Leu Tyr Lys His Val Asp Thr Gly Arg
 145 150 155 160

Arg Tyr Tyr Val Ala Leu Asn Lys Asp Gly Thr Pro Arg Glu Gly Thr
 165 170 175

Arg Thr Lys Arg His Gln Lys Phe Thr His Phe Leu Pro Arg Pro Val
 180 185 190

Asp Pro Asp Lys Val Pro Glu Leu Tyr Lys Asp Ile Leu Ser Gln Ser
 195 200 205

<210> 24
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 <213> Mus musculus

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 Met Ala Glu Gly Glu Ile Thr Thr Phe Ala Ala Leu Thr Glu Arg Phe
 1 5 10 15

Asn Leu Pro Leu Gly Asn Tyr Lys Lys Pro Lys Leu Leu Tyr Cys Ser
 20 25 30

Asn Gly Gly His Phe Leu Arg Ile Leu Pro Asp Gly Thr Val Asp Gly
 35 40 45

Thr Arg Asp Arg Ser Asp Gln His Ile Gln Leu Gln Leu Ser Ala Glu
50 55 60
Ser Ala Gly Glu Val Tyr Ile Lys Gly Thr Glu Thr Gly Gln Tyr Leu
65 70 75 80
Ala Met Asp Thr Glu Gly Leu Leu Tyr Gly Ser Gln Thr Pro Asn Glu
85 90 95
Glu Cys Leu Phe Leu Glu Arg Leu Glu Glu Asn His Tyr Asn Thr Tyr
100 105 110
Thr Ser Lys Lys His Ala Glu Lys Asn Trp Phe Val Gly Leu Lys Lys
115 120 125
Asn Gly Ser Cys Lys Arg Gly Pro Arg Thr His Tyr Gly Gln Lys Ala
130 135 140
Ile Leu Phe Leu Pro Leu Pro Val Ser Ser Asp
145 150 155

| B |
<210> 25
<211> 245
<212> PRT
<213> Mus musculus

<400> 25
Met Thr Ala Ala Ile Ala Ser Ser Leu Ile Arg Gln Lys Arg Gln Ala
1 5 10 15
Arg Glu Arg Glu Lys Ser Asn Ala Cys Lys Cys Val Ser Ser Pro Ser
20 25 30
Lys Gly Lys Thr Ser Cys Asp Lys Asn Lys Leu Asn Val Phe Ser Arg
35 40 45
Val Lys Leu Phe Gly Ser Lys Lys Arg Arg Arg Arg Pro Glu Pro
50 55 60
Gln Leu Lys Gly Ile Val Thr Lys Leu Tyr Ser Arg Gln Gly Tyr His
65 70 75 80
Leu Gln Leu Gln Ala Asp Gly Thr Ile Asp Gly Thr Lys Asp Glu Asp
85 90 95
Ser Thr Tyr Thr Leu Phe Asn Leu Ile Pro Val Gly Leu Arg Val Val
100 105 110
Ala Ile Gln Gly Val Gln Thr Lys Leu Tyr Leu Ala Met Asn Ser Glu
115 120 125
Gly Tyr Leu Tyr Thr Ser Glu His Phe Thr Pro Glu Cys Lys Phe Lys
130 135 140
Glu Ser Val Phe Glu Asn Tyr Tyr Val Thr Tyr Ser Ser Met Ile Tyr

145 150 155 160
Arg Gln Gln Gln Ser Gly Arg Gly Trp Tyr Leu Gly Leu Asn Lys Glu

165 170 175
Gly Glu Ile Met Lys Gly Asn His Val Lys Lys Asn Lys Pro Ala Ala

180 185 190
Gly Glu Ile Met Lys Gly Asn His Val Lys Lys Asn Lys Pro Ala Ala

195 200 205
His Phe Leu Pro Lys Pro Leu Lys Val Ala Met Tyr Lys Glu Pro Ser

210 215 220
Leu His Asp Leu Thr Glu Phe Ser Arg Ser Gly Ser Gly Thr Pro Thr

225 230 235 240
Lys Ser Arg Ser Val Ser Gly Val Leu Asn Gly Gly Lys Ser Met Ser

His Asn Glu Ser Thr
245

B1
<210> 26
<211> 247
<212> PRT
<213> Mus musculus

<400> 26
Met Ala Ala Ala Ile Ala Ser Gly Leu Ile Arg Gln Lys Arg Gln Ala
1 5 10 15

Arg Glu Gln His Trp Asp Arg Pro Ser Ala Ser Arg Arg Arg Ser Ser
20 25 30

Pro Ser Lys Asn Arg Gly Leu Phe Asn Gly Asn Leu Val Asp Ile Phe
35 40 45

Ser Lys Val Arg Ile Phe Gly Leu Lys Lys Arg Arg Leu Arg Arg Gln
50 55 60

Asp Pro Gln Leu Lys Gly Ile Val Thr Arg Leu Tyr Cys Arg Gln Gly
65 70 75 80

Tyr Tyr Leu Gln Met His Pro Asp Gly Ala Leu Asp Gly Thr Lys Asp
85 90 95

Asp Ser Thr Asn Ser Thr Leu Phe Asn Leu Ile Pro Val Gly Leu Arg
100 105 110

Val Val Ala Ile Gln Gly Val Lys Thr Gly Leu Tyr Ile Ala Met Asn
115 120 125

Gly Glu Gly Tyr Leu Tyr Pro Ser Glu Leu Phe Thr Pro Glu Cys Lys
130 135 140

Phe Lys Glu Ser Val Phe Glu Asn Tyr Tyr Val Ile Tyr Ser Ser Met
145 150 155 160

Leu Tyr Arg Gln Gln Glu Ser Gly Arg Ala Trp Phe Leu Gly Leu Asn
165 170 175
Lys Glu Gly Gln Val Met Lys Gly Asn Arg Val Lys Lys Thr Lys Pro
180 185 190
Ala Ala His Phe Leu Pro Lys Pro Leu Glu Val Ala Met Tyr Arg Glu
195 200 205
Pro Ser Leu His Asp Val Gly Glu Thr Val Pro Lys Ala Gly Val Thr
210 215 220
Pro Ser Lys Ser Thr Ser Ala Ser Ala Ile Met Asn Gly Gly Lys Pro
225 230 235 240
Val Asn Lys Cys Lys Thr Thr
245

B
<210> 27
<211> 154
<212> PRT
<213> *Mus musculus*

<400> 27
Met Ala Ala Ser Gly Ile Thr Ser Leu Pro Ala Leu Pro Glu Asp Gly
1 5 10 15
Gly Ala Ala Phe Pro Pro Gly His Phe Lys Asp Pro Lys Arg Leu Tyr
20 25 30
Cys Lys Asn Gly Gly Phe Phe Leu Arg Ile His Pro Asp Gly Arg Val
35 40 45
Asp Gly Val Arg Glu Lys Ser Asp Pro His Val Lys Leu Gln Leu Gln
50 55 60
Ala Glu Glu Arg Gly Val Val Ser Ile Lys Gly Val Cys Ala Asn Arg
65 70 75 80
Tyr Leu Ala Met Lys Glu Asp Gly Arg Leu Leu Ala Ser Lys Cys Val
85 90 95
Thr Glu Glu Cys Phe Phe Glu Arg Leu Glu Ser Asn Asn Tyr Asn
100 105 110
Thr Tyr Arg Ser Arg Lys Tyr Ser Ser Trp Tyr Val Ala Leu Lys Arg
115 120 125
Thr Gly Gln Tyr Lys Leu Gly Ser Lys Thr Gly Pro Gly Gln Lys Ala
130 135 140
Ile Leu Phe Leu Pro Met Ser Ala Lys Ser
145 150

<210> 28

<211> 245
<212> PRT
<213> *Mus musculus*

<400> 28
Met Gly Leu Ile Trp Leu Leu Leu Leu Ser Leu Leu Glu Pro Ser Trp
1 5 10 15
Pro Thr Thr Gly Pro Gly Thr Arg Leu Arg Arg Asp Ala Gly Gly Arg
20 25 30
Gly Gly Val Tyr Glu His Leu Gly Ala Pro Arg Arg Arg Lys Leu
35 40 45
Tyr Cys Ala Thr Lys Tyr His Leu Gln Leu His Pro Ser Gly Arg Val
50 55 60
Asn Gly Ser Leu Glu Asn Ser Ala Tyr Ser Ile Leu Glu Ile Thr Ala
65 70 75 80
Val Glu Val Gly Val Val Ala Ile Lys Gly Leu Phe Ser Gly Arg Tyr
85 90 95
Leu Ala Met Asn Lys Arg Gly Arg Leu Tyr Ala Ser Asp His Tyr Asn
100 105 110
Ala Glu Cys Glu Phe Val Glu Arg Ile His Glu Leu Gly Tyr Asn Thr
115 120 125
Tyr Ala Ser Arg Leu Tyr Arg Thr Gly Ser Ser Gly Pro Gly Ala Gln
130 135 140
Arg Gln Pro Gly Ala Gln Arg Pro Trp Tyr Val Ser Val Asn Gly Lys
145 150 155 160
Gly Arg Pro Arg Arg Gly Phe Lys Thr Arg Arg Thr Gln Lys Ser Ser
165 170 175
Leu Phe Leu Pro Arg Val Leu Gly His Lys Asp His Glu Met Val Arg
180 185 190
Leu Leu Gln Ser Ser Gln Pro Arg Ala Pro Gly Glu Gly Ser Gln Pro
195 200 205
Arg Gln Arg Arg Gln Lys Lys Gln Ser Pro Gly Asp His Gly Lys Met
210 215 220 225
Glu Thr Leu Ser Thr Arg Ala Thr Pro Ser Thr Gln Leu His Thr Gly
230 235 240
Gly Leu Ala Val Ala
245

<210> 29
<211> 202
<212> PRT

<213> Mus musculus

B1

<400> 29
Met Ala Lys Arg Gly Pro Thr Thr Gly Thr Leu Leu Pro Arg Val Leu
1 5 10 15
Leu Ala Leu Val Val Ala Leu Ala Asp Arg Gly Thr Ala Ala Pro Asn
20 25 30
Gly Thr Arg His Ala Glu Leu Gly His Gly Trp Asp Gly Leu Val Ala
35 40 45
Arg Ser Leu Ala Arg Leu Pro Val Ala Ala Gln Pro Pro Gln Ala Ala
50 55 60
Val Arg Ser Gly Ala Gly Asp Tyr Leu Leu Gly Leu Lys Arg Leu Arg
65 70 75 80
Arg Leu Tyr Cys Asn Val Gly Ile Gly Phe His Leu Gln Val Leu Pro
85 90 95
Asp Gly Arg Ile Gly Gly Val His Ala Asp Thr Arg Asp Ser Leu Leu
100 105 110
Glu Leu Ser Pro Val Gln Arg Gly Val Val Ser Ile Phe Gly Val Ala
115 120 125
Ser Arg Phe Phe Val Ala Met Ser Ser Arg Gly Lys Leu Phe Gly Val
130 135 140
Asn Tyr Asn Ala Tyr Glu Ala Tyr Ala Tyr Pro Gly Met Phe Met Ala
145 150 155 160
Leu Ser Lys Asn Gly Arg Thr Lys Lys Gly Asn Arg Val Ser Pro Thr
180 185 190
Met Lys Val Thr His Phe Leu Pro Arg Leu
195 200

<210> 30

<211> 264

<212> PRT

<213> Mus musculus

<400> 30
Met Ser Leu Ser Leu Leu Phe Leu Ile Phe Cys Ser His Leu Ile His
1 5 10 15
Ser Ala Trp Ala His Gly Glu Lys Arg Leu Thr Pro Glu Gly Gln Pro
20 25 30
Ala Pro Pro Arg Asn Pro Gly Asp Ser Ser Gly Ser Arg Gly Arg Ser
35 40 45

Ser Ala Thr Phe Ser Ser Ser Ser Ala Ser Ser Pro Val Ala Ala Ser
50 55 60

Pro Gly Ser Gln Gly Ser Gly Ser Glu His Ser Ser Phe Gln Trp Ser
65 70 75 80

Pro Ser Gly Arg Arg Thr Gly Ser Leu Tyr Cys Arg Val Gly Ile Gly
85 90 95

Phe His Leu Gln Ile Tyr Pro Asp Gly Lys Val Asn Gly Ser His Glu
100 105 110

Ala Ser Val Leu Ser Ile Leu Glu Ile Phe Ala Val Ser Gln Gly Ile
115 120 125

Val Gly Ile Arg Gly Val Phe Ser Asn Lys Phe Leu Ala Met Ser Lys
130 135 140

B
Lys Gly Lys Leu His Ala Ser Ala Lys Phe Thr Asp Asp Cys Lys Phe
145 150 155 160

Arg Glu Arg Phe Gln Glu Asn Ser Tyr Asn Thr Tyr Ala Ser Ala Ile
165 170 175

His Arg Thr Glu Lys Thr Gly Arg Glu Trp Tyr Val Ala Leu Asn Lys
180 185 190

Arg Gly Lys Ala Lys Arg Gly Cys Ser Pro Arg Val Lys Pro Gln His
195 200 205

Val Ser Thr His Phe Leu Pro Arg Phe Lys Gln Ser Glu Gln Pro Glu
210 215 220

Leu Ser Phe Thr Val Thr Val Pro Glu Lys Lys Lys Pro Pro Val Lys
225 230 235 240

Pro Lys Val Pro Leu Ser Gln Pro Arg Arg Ser Pro Ser Pro Val Lys
245 250 255

Tyr Arg Leu Lys Phe Arg Phe Gly
260

<210> 31
<211> 208
<212> PRT
<213> Mus musculus

<400> 31
Met Ala Leu Gly Gln Arg Leu Phe Ile Thr Met Ser Arg Gly Ala Gly
1 5 10 15

Arg Val Gln Gly Thr Leu Gln Ala Leu Val Phe Leu Gly Val Leu Val
20 25 30

Gly Met Val Val Pro Ser Pro Ala Gly Ala Arg Ala Asn Gly Thr Leu

35	40	45
Leu Asp Ser Arg Gly Trp Gly Thr Leu Leu Ser Arg Ser Arg Ala Gly		
50 55 60		
Leu Ala Gly Glu Ile Ser Gly Val Asn Trp Glu Ser Gly Tyr Leu Val		
65 70 75 80		
Gly Ile Lys Arg Gln Arg Arg Leu Tyr Cys Asn Val Gly Ile Gly Phe		
85 90 95		
His Leu Gln Val Pro Pro Asp Gly Arg Ile Ser Gly Thr His Glu Glu		
100 105 110		
Asn Pro Tyr Ser Leu Leu Glu Ile Ser Thr Val Glu Arg Gly Val Val		
115 120 125		
Ser Leu Phe Gly Val Lys Ser Ala Leu Phe Ile Ala Met Asn Ser Lys		
130 135 140		
Gly Arg Leu Tyr Thr Thr Pro Ser Phe His Asp Glu Cys Lys Phe Arg		
145 150 155 160		
Glu Thr Leu Leu Pro Asn Asn Tyr Asn Ala Tyr Glu Ser Asp Leu Ty		
165 170 175		
Arg Gly Thr Tyr Ile Ala Leu Ser Lys Tyr Gly Arg Val Lys Arg Gl		
180 185 190		
Ser Lys Val Ser Pro Ile Met Thr Val Thr His Phe Leu Pro Arg Il		
195 200 205		

<210> 32
<211> 194
<212> PRT
<213> *Mus musculus*

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<400> 32
Met Arg Lys Trp Ile Leu Thr Arg Ile Leu Pro Thr Leu Leu Tyr Arg
1 5 10 15
Ser Cys Phe His Leu Val Cys Leu Val Gly Thr Ile Ser Leu Ala Cys
20 25 30
Asn Asp Met Ser Pro Glu Gln Thr Ala Thr Ser Val Asn Cys Ser Ser
35 40 45
Pro Glu Arg His Thr Arg Ser Tyr Asp Tyr Met Glu Gly Gly Asp Ile
50 55 60
Arg Val Arg Arg Leu Phe Cys Arg Thr Gln Trp Tyr Leu Arg Ile Asp
65 70 75 80

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Lys Arg Gly Lys Val Lys Gly Thr Gln Glu Met Lys Asn Ser Tyr Asn
85 90 95
Ile Met Glu Ile Arg Thr Val Ala Val Gly Ile Val Ala Ile Lys Gly
100 105 110
Val Glu Ser Glu Tyr Tyr Leu Ala Met Asn Lys Glu Gly Lys Leu Tyr
115 120 125
Ala Lys Lys Glu Cys Asn Glu Asp Cys Asn Phe Lys Glu Leu Ile Leu
130 135 140
Glu Asn His Tyr Asn Thr Tyr Ala Ser Ala Lys Trp Thr His Ser Gly
145 150 155 160
Gly Glu Met Phe Val Ala Leu Asn Gln Lys Gly Ile Pro Val Lys Gly
165 170 175
Lys Lys Thr Lys Lys Glu Gln Lys Thr Ala His Phe Leu Pro Met Ala
180 185 190

Ile Thr

<210> 33
<211> 208
<212> PRT
<213> *Mus musculus*

<400> 33
Met Ala Pro Leu Gly Glu Val Gly Ser Tyr Phe Gly Val Gln Asp Ala
1 5 10 15
Val Pro Phe Gly Asn Val Pro Val Leu Pro Val Asp Ser Pro Val Leu
20 25 30
Leu Asn Asp His Leu Gly Gln Ser Glu Ala Gly Gly Leu Pro Arg Gly
35 40 45
Pro Ala Val Thr Asp Leu Asp His Leu Lys Gly Ile Leu Arg Arg Arg
50 55 60
Gln Leu Tyr Cys Arg Thr Gly Phe His Leu Glu Ile Phe Pro Asn Gly
65 70 75 80
Thr Ile Gln Gly Thr Arg Lys Asp His Ser Arg Phe Gly Ile Leu Glu
85 90 95
Phe Ile Ser Ile Ala Val Gly Leu Val Ser Ile Arg Gly Val Asp Ser
100 105 110
Gly Leu Tyr Leu Gly Met Asn Glu Lys Gly Glu Leu Tyr Gly Ser Glu
115 120 125
Lys Leu Thr Gln Glu Cys Val Phe Arg Glu Gln Phe Glu Glu Asn Trp
130 135 140

Tyr Asn Thr Tyr Ser Ser Asn Leu Tyr Lys His Val Asp Thr Gly Arg
145 150 155 160

Arg Tyr Tyr Val Ala Leu Asn Lys Asp Gly Thr Pro Arg Glu Gly Thr
165 170 175

Arg Thr Lys Arg His Gln Lys Phe Thr His Phe Leu Pro Arg Pro Val
180 185 190

Asp Pro Asp Lys Val Pro Glu Leu Tyr Lys Asp Ile Leu Ser Gln Ser
195 200 205

B1
<210> 34
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Random primer
with Not I restriction site for first strand cDNA
synthesis

<220>
<221> misc_feature
<222> (25)..(33)
<223> "N" can be A, G, C, or T

<400> 34
ggaaggaaaa aagcggccgc aacannnnnn nnn 33

<210> 35
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer for
first strand cDNA synthesis

<400> 35
aatccgatgc ccacgttgca gta 23

<210> 36
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR primer for
amplification of cDNA

<400> 36
aaaatcttag accgacgact gtgttt

26

<210> 37
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR primer for
amplification of cDNA

<400> 37
gagtctccgc agcctttga gg 22

31
<210> 38
<211> 34
<212> DNA
<213> Homo sapiens

<400> 38
actggcggcc gcaggcatca tcccagttga ggag 34

<210> 39
<211> 36
<212> DNA
<213> Homo sapiens

<400> 39
actggtcact cgagggtacc ttagctagcc cccggg 36

<210> 40
<211> 29
<212> PRT
<213> Mus musculus

<400> 40
Met Glu Trp Met Arg Ser Arg Val Gly Thr Leu Gly Leu Trp Val Arg
1 5 10 15

Leu Leu Leu Ala Val Phe Leu Leu Gly Val Tyr Gln Ala
20 25

<210> 41
<211> 28
<212> PRT
<213> Homo sapiens

<400> 41
Met Asp Ser Asp Glu Thr Gly Phe Glu His Ser Gly Leu Trp Val Ser
1 5 10 15

Val Leu Ala Gly Leu Leu Leu Gly Ala Cys Gln Ala
20 25